

REMARKS

Claims 22-32 were previously pending for examination in this application. Claims 1-21 and 33-41 were withdrawn. Claims 1-21 and 33-41 have now been canceled without prejudice or disclaimer. Claim 22-24, 27 and 29-32 have been amended. New method claims 42-60 have been added. As a result, claims 22-32 and 42-60 are pending for examination with claims 22 and 42 being independent claims. No new matter has been added.

Preliminary Matters

The Applicants note with appreciation that initialed copies of several Information Disclosure Statements (IDSs) submitted by the Applicants were attached to the Office Action mailed September 23, 2004. However, initialed copies of IDSs submitted on February 5, 2002 and July 26, 2002 were not provided to the Applicants. Copies of the IDSs submitted on February 5, 2002 and July 26, 2002 are provided herewith along with corresponding copies of postcards stamped by the USPTO. The Applicants respectfully request that initialed copies of the IDSs submitted on February 5, 2002 and July 26, 2002 be sent to the Applicants by the Examiner with the next correspondence.

Rejections Under 35 U.S.C. §102

Claims 22-32 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,867,302 to Fleming (hereinafter Fleming). The Applicants disagree with the Examiner's characterization of Fleming and respond as follows.

Claim 22 as amended recites "An electrostatically-actuated diffractive optical processor having ... an axis normal to at least a portion of a surface of [a] substrate ... comprising: a plurality of first mirror surfaces ...; [and] a plurality of second mirror surfaces, at least a portion of each of the plurality of second mirror surfaces ... optically adjacent to at least a corresponding one of the plurality of first mirror surfaces for light projected parallel to the axis." The term "optically adjacent surfaces" is defined on page 7, line 2 et. seq. as meaning surfaces that, for light of a specified angle of projection, are located such that when light is projected onto the surfaces at the specified angle, the light is projected onto one or the other surface, and substantially no light impinges on points between the surfaces.

An example of an optical processor having surfaces that are optically adjacent for light projected parallel to an axis is provided in FIG. 3 of the Applicants' specification, where surface 210b is optically adjacent to surface 215b for light 350 projected parallel to an axis Z which is normal to a surface of substrate 330.

By contrast, in FIG. 4b of Fleming (the figure to which the Office Action refers), Fleming discloses two mirror surfaces 38 and 38' that are not optically adjacent for light projected parallel to an axis perpendicular to a surface of a substrate. Rather, when light is projected parallel to an axis normal to a surface of substrate 12, the light is projected into a gap located between mirror surfaces 38 and 38'. In this regard, the device disclosed in Fleming is like the prior art optical processor discussed with reference to FIG. 1 of the Applicants' specification.

Accordingly, claim 22 is patentable over Fleming. Claims 23-32 depend from claim 22 and are patentable for at least the same reasons as claim 22. Withdrawal of these rejections is respectfully requested.

The Applicants note that other than the amendment to claim 22 regarding optical adjacency being specified for light projected parallel to the axis, as discussed above in the Remarks section, the remaining amendments to claim 22 and other claims are made to clarify the claimed subject matter and not for reasons of patentability.

New claims 42-51 depend from claim 22 and are patentable for at least the same reasons as claim 22.

New method claims 52-60 are patentable over Flemming at least because they recite a step of "providing ... an optical processor ... comprising ... second mirror surfaces optically adjacent to at least a corresponding one of [a] plurality of first mirror surfaces for light projected parallel to [an axis normal to at least a portion of a surface of a substrate of the optical processor]."


CONCLUSION

In view of the foregoing amendments and remarks, reconsideration is respectfully requested. This application should now be in condition for allowance; a notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not

in condition for allowance, the Examiner is requested to call the Applicants' attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, the Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50/2762.

Respectfully submitted,
Erik R. Deutsch, et al., Applicants

By: 
Jeffrey B. Powers, Reg. No. 45,021
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One Main Street
Cambridge, Massachusetts 02142
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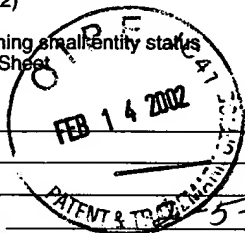
Docket No.: P0743/7001 (SJH)
Date: December 22, 2004



Serial No. 09/975,169 File No. P0743/7001 By: STH/JPB
Title: Activatable Diffractive Optical Processor
Application of Erik R. Deutsch et al WGS Date:

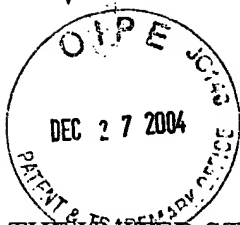
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Express Mail Label No. <u> </u></p> <p><input type="checkbox"/> Patent Application</p> <p><input type="checkbox"/> Non-provisional <input type="checkbox"/> Provisional</p> <p>Incl. <u> </u> pages, (<u> </u> pgs) Specification,
(<u> </u> pgs) Abstract, (<u> </u> pgs) Claims (<u> </u> # claims)</p> <p><input type="checkbox"/> Design Patent Application</p> <p><input type="checkbox"/> Declaration(s) <u> </u></p> <p><input type="checkbox"/> Drawings <u> </u> Sheet(s) (FIGS. <u> </u> - <u> </u>)</p> <p><input type="checkbox"/> <input type="checkbox"/> Formal <input type="checkbox"/> Informal</p> <p><input type="checkbox"/> Utility Patent Application Transmittal</p> <p><input type="checkbox"/> Fee calculation sheet (x2)</p> <p><input type="checkbox"/> CPA Transmittal</p> <p><input type="checkbox"/> Verified Statement claiming small entity status</p> <p><input type="checkbox"/> Assignment and Cover Sheet</p> <p><input type="checkbox"/> Other <u> </u></p> | <p><input type="checkbox"/> Provisional Application Cover Sheet</p> <p><input type="checkbox"/> Multiple Dependent Claim Fee Sheet</p> <p><input checked="" type="checkbox"/> Inf. Discl. Statement, PTO Form 1449</p> <p><input checked="" type="checkbox"/> References Cited</p> <p><input type="checkbox"/> Priority Document(s) # <u> </u></p> <p><input type="checkbox"/> Copy of Notice to File Missing Parts</p> <p><input type="checkbox"/> Amendment/Response</p> <p><input type="checkbox"/> Petition for Ext. of Time (x2)</p> <p><input type="checkbox"/> Issue Fee Transmittal</p> <p><input type="checkbox"/> Letter to Official Draftsperson</p> <p><input type="checkbox"/> Notice of Appeal</p> <p><input type="checkbox"/> Brief (x3)</p> <p><input type="checkbox"/> Check for \$ <u> </u> Check # <u> </u></p> <p><input checked="" type="checkbox"/> Transmittal Letter (x2)</p> <p><input type="checkbox"/> Cert. of Mailing under 37 CFR 1.8(a)</p> |
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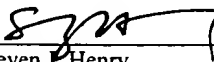
ATTORNEY'S DOCKET NO: P0743/7001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Erik R. Deutsch et al.
Serial No: 09/975,169
Filed: October 11, 2001
For: Actuatable Diffractive Optical Processor
Examiner: Not Yet Assigned
Art Unit: 2872

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Commissioner for Patents, Washington, D.C. 20231, on the 5th day of February, 2002.


Steven J. Henry
Reg. No. 27,900

Commissioner For Patents
Washington, D.C. 20231

Sir:

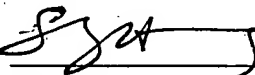
Transmitted herewith are the following documents:

- ☒ Information Disclosure Statement, PTO Form 1449 and references
- ☒ Return Receipt Postcard

If the enclosed papers are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned at (617) 720-3500, Boston, Massachusetts.

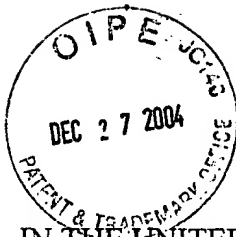
No check is enclosed to cover the filing fee. If the fee is insufficient, the balance may be charged to the account of the undersigned, Deposit Account No. 23/2825. A duplicate of this sheet is enclosed.

Respectfully Submitted,



Steven J. Henry
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Docket No: P0743/7001
Date: February 5th, 2002
xddd



ATTORNEY'S DOCKET NO: P0743/7001 (SJH)

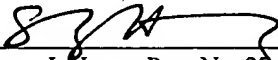
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Erik Deutsch, et al.
Serial No: 09/975,169
Filed: October 11, 2001
For: ACTUATABLE DIFFRACTIVE OPTICAL PROCESSOR

Examiner: Not Yet Assigned
Art Unit: 2872

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Commissioner for Patents, Washington, D.C. 20231, on the 5 day of February, 2002.


Steven J. Henry, Reg. No. 27,900

Commissioner for Patents
Washington, D.C. 20231

**STATEMENT FILED PURSUANT TO THE DUTY OF
DISCLOSURE UNDER 37 CFR §§1.56, 1.97 AND 1.98**

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, the Applicant requests consideration of this Information Disclosure Statement.

PART I: Compliance with 37 C.F.R. §1.97

This Information Disclosure Statement has been filed before the mailing date of a first Office Action on the merits in the above-identified case. No fee or certification is required.

PART II: Information Cited

The Applicant hereby makes of record in the above-identified application the information listed on the attached form PTO-1449 (modified). The order of presentation of the references should not be construed as an indication of the importance of the references.

PART III: Explanation of Non-English Language References and Remarks Concerning Other Information Cited

The following is a concise explanation of the relevance of each non-English language reference listed on the attached form PTO-1449 (modified):

The following are remarks concerning the other information cited:

PART IV: Remarks

Documents cited on the attached form PTO-1449 (modified) are enclosed unless otherwise indicated on the attached form PTO-1449 (modified). It is respectfully requested that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;
2. The enclosed form PTO-1449 be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application;
3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicant makes no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

Notwithstanding any statements by the Applicant, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

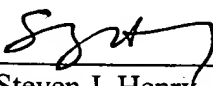
Serial No.: 09/975,169

- 3 -

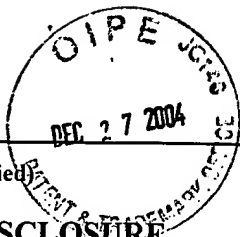
Art Unit: 2872

An early and favorable action is hereby requested.

Respectfully submitted,
Erik Deutsch et al., Applicant(s)

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Docket No. P0743/7001
Dated: February 5, 2002
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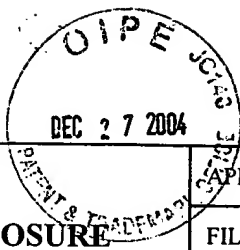
FORM PTO-1449/A and B (Modified) INFORMATION DISCLOSURE STATEMENT BY APPLICANT			APPLICATION NO.: 09/975,169	ATTY. DOCKET NO.: P0743/7001	
			FILING DATE: October 11, 2001		
			APPLICANT: Erik Deutsch et al.		
			GROUP ART UNIT: 2872	EXAMINER: Not Yet Assigned	
Sheet	1	of	2		

U.S. PATENT DOCUMENTS

Examiner's Initials#	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication or of issue of Cited Document MM-DD-YYY
		Number	Kind Code		
		4,731,670		Allen et al.	03-15-1988
		4,805,038		Seligson	02-14-1989
		5,115,344		Jaskie	05-19-1992
		5,212,582		Nelson	05-18-1993
		5,781,670		Deacon et al.	07-14-1998
		5,794,023		Hobbs et al.	08-11-1998
		5,836,203		Martin et al.	11-17-1998
		5,847,859		Murata	12-08-1998
		5,870,221		Goossen	02-09-1999
		5,905,589		Tanaka et al.	05-18-1999
		5,933,277		Troxell et al.	08-03-1999
		5,953,161		Troxell et al.	09-14-1999
		6,014,257		Furlani et al.	01-11-2000
		6,031,652		Furlani et al.	02-29-2000
		6,038,057		Brazas, Jr. et al.	03-14-2000
		6,067,183		Furlani et al.	05-23-2000
		6,072,620		Shiono et al.	06-06-2000
		6,088,148		Furlani et al.	07-11-2000
		6,130,770		Bloom	10-10-2000
		6,144,481		Kowarz et al.	11-07-2000
		6,175,443	B1	Aksyuk et al.	01-16-2001
		6,181,458	B1	Brazas, Jr. et al.	01-30-2001
		6,233,087	B1	Hawkins et al.	05-15-2001
		6,238,581	B1	Hawkins et al.	05-29-2001
		6,243,194	B1	Brazas, Jr. et al.	06-05-2001
		6,282,012	B1	Kowarz et al.	08-28-2001
		6,282,213	B1	Gutin et al.	08-28-2001
		6,284,560	B1	Jech, Jr. et al.	09-04-2001
		6,288,824	B1	Kastalsky	09-11-2001

FOREIGN PATENT DOCUMENTS

Examiner's Initials#	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document (not necessary)	Date of Publication of Cited Document MM-DD-YYYY	Translation (Y/N)
		Office/Country	Number	Kind Code			
		WO	91/02991	A1		03-07-1991	
		WO	98/41893	A1		09-24-1998	
		WO	01/11394	A1		02-15-2001	



FORM PTO-1449/A and B (Modified)				APPLICATION NO.: 09/975,169		ATTY. DOCKET NO.: P0743/7001		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				FILING DATE: October 11, 2001				
				APPLICANT: Erik Deutsch et al.				
				GROUP ART UNIT: 2872		EXAMINER: Not Yet Assigned		
Sheet	2	of	2					

FOREIGN PATENT DOCUMENTS

Examiner's Initials#	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document (not necessary)	Date of Publication of Cited Document MM-DD-YYYY	Translation (Y/N)
		WO	01/11396	A1		02-15-2001	
		EP	1 122 577 A2			08-08-2001	
		EP	1 143 287 A2			10-10-2001	

OTHER ART — NON PATENT LITERATURE DOCUMENTS

Examiner's Initials#	Cite No	Include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, relevant page(s), volume-issue number(s), publisher, city and/or country where published.	Translation (Y/N)

EXAMINER	DATE CONSIDERED
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#EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

*a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, Serial No. _____, filed _____, and relied upon for an earlier filing date under 35 U.S.C. 120 (continuation, continuation-in-part, and divisional applications).

[NOTE - Must provide a copy of any patent, publication, other information listed, even if it was previously submitted to, or cited by, the U.S. Patent Office in an earlier application, unless the earlier application is identified by the IDS and is relied upon for an earlier filing date under 35 U.S.C. §120, and the copy was provided in the earlier application.]



Serial No 09/975169 File No. P0743/2001 By: JBP

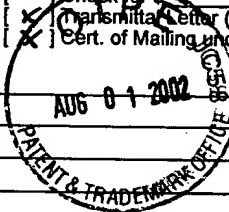
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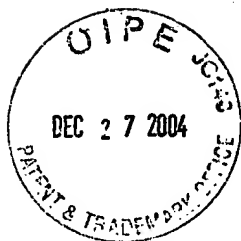
Application of ERIK R. DEUTSCH ET AL. WGS Date: _____

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| <input type="checkbox"/> Express Mail Label No. _____ | <input type="checkbox"/> Multiple Dependent Claim Fee Sheet |
| <input type="checkbox"/> Patent Application | <input checked="" type="checkbox"/> Inf. Disc. Statement, PTO Form 1449 |
| <input type="checkbox"/> Non-provisional <input type="checkbox"/> Provisional | <input checked="" type="checkbox"/> References Cited |
| Incl. _____ pages, (_____ pgs) Specification, | <input type="checkbox"/> Priority Document(s) # _____ |
| (_____ pgs) Abstract, (_____ pgs) Claims (_____ # claims) | <input type="checkbox"/> Copy of Notice to File Missing Parts |
| <input type="checkbox"/> Design Patent Application | <input type="checkbox"/> Amendment/Response |
| <input type="checkbox"/> Declaration(s) _____ | <input type="checkbox"/> Petition for Ext. of Time (x2) |
| <input type="checkbox"/> Drawings _____ Sheet(s) (FIGS. _____) | <input type="checkbox"/> Issue Fee Transmittal |
| <input type="checkbox"/> Formal <input type="checkbox"/> Informal | <input type="checkbox"/> Letter to Official Draftsperson |
| <input type="checkbox"/> Utility Patent Application Transmittal | <input type="checkbox"/> Notice of Appeal |
| <input type="checkbox"/> Fee calculation sheet (x2) | <input type="checkbox"/> Brief (x3) |
| <input type="checkbox"/> CPA Transmittal | <input type="checkbox"/> Check for _____ Check # _____ |
| <input type="checkbox"/> Verified Statement claiming small entity status | <input checked="" type="checkbox"/> Transmittal Letter (x2) |
| <input type="checkbox"/> Assignment and Cover Sheet | <input checked="" type="checkbox"/> Cert. of Mailing under 37 CFR 1.8(a) |
| <input type="checkbox"/> Other _____ | |

DATE MAILED 7-26-02





Attorney's Docket No. P0743/7001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Erik R. DEUTSCH, Malcolm C. SMITH, Michael A. BUTLER and Stephen D. SENTURIA
Serial No.: 09/975,169
Filing Date: October 11, 2001
For: ACTUABLE DIFFRACTIVE OPTICAL PROCESSOR

Examiner: Unassigned
Art Unit: 2872

Confirmation No. 9099

Commissioner for Patents
Washington, D.C. 20231

Sir/Madam:

Transmitted herewith for filing is/are the following document(s):

- ☒ Supplemental Information Disclosure Statement
- ☒ PTO Form 1449 With Cited References
- ☒ Return Post Card

If the enclosed papers are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned collect at (617)720-3500, Boston, Massachusetts.

No check is enclosed. If it is determined that a fee is necessary, the fee may be charged to the account of the undersigned, Deposit Account No. 23/2825. A duplicate of this sheet is enclosed.

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

I hereby certify that this document is being placed in the United States mail with first-class postage attached, addressed to the Commissioner for Patents, Washington, D.C. 20231 on July 26, 2002.

Attorney's Docket No. P0743/7001

Respectfully submitted,

ERIK R. DEUTSCH et al.

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Tel. (617)720-3500
Attorneys for the Applicant(s)



Attorney's Docket No. P0743/7001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Erik R. DEUTSCH, Malcolm C. SMITH, Michael A. BUTLER and Stephen D. SENTURIA
Serial No.: 09/975,169
Filing Date: October 11, 2001
For: ACTUABLE DIFFRACTIVE OPTICAL PROCESSOR

Examiner: Unassigned
Art Unit: 2872

Confirmation No. 9099

Commissioner for Patents
Washington, D.C. 20231

SUPPLEMENTAL STATEMENT FILED PURSUANT TO THE DUTY OF
DISCLOSURE UNDER 37 CFR §1.56, 1.97 AND 1.98

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, the Applicant requests consideration of this Information Disclosure Statement.

Compliance with 37 C.F.R. §1.97

This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits in the above-identified case. No fee or certification is required.

Information Cited

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REMARKS

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1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;

2. The enclosed form PTO-1449 be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application;

3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicant makes no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

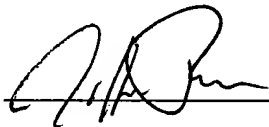
By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

Notwithstanding any statements by the Applicant, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

An early and favorable action is hereby requested.

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

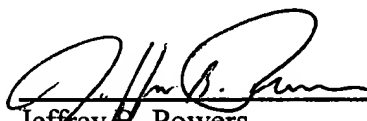
I hereby certify that this document is being placed in the United States mail with first-class postage attached, addressed to the Commissioner for Patents, Washington, D.C. 20231 on July 26, 2002.



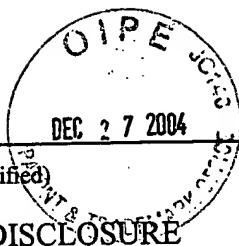
Attorney's Docket No. P0743/7001

Respectfully submitted,

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Attorneys for the Applicant(s)



FORM PTO-1449/A and B (Modified) INFORMATION DISCLOSURE STATEMENT BY APPLICANT				APPLICATION NO.: 09/975,169		ATTY. DOCKET NO.: P0743/7001	
				FILING DATE: October 11, 2001			
				APPLICANT: Erik R. Deutsch et al.			
				GROUP ART UNIT: 2872		EXAMINER:	
Sheet	1	of	6				

U.S. PATENT DOCUMENTS

Examiner's Initials #	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication or of issue of Cited Document MM-DD-YY
		Number	Kind Code		
		3,553,364		Lee	01/05/71
		4,234,788		Palmer et al.	11/18/80
		5,022,745		Zayhowski et al.	06/11/91
		5,164,688		Larson	11/17/92
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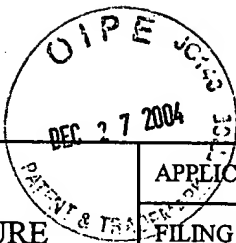
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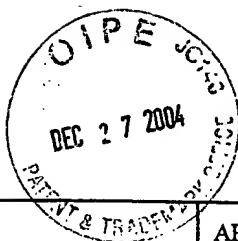
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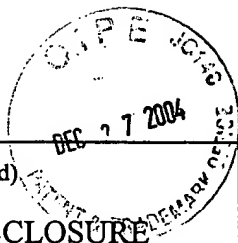
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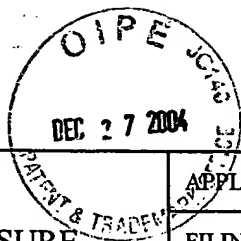
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